Explanation of Amendments in the Claims:

1. (cancel).

Add new claims as follows:

2.(new) A method of selective absorption of hydrogen sulfide relative to carbon dioxide from a supply gas stream comprising:

providing a supply gas stream containing at least a product gas, hydrogen sulfide and carbon dioxide;

providing an absorbent which absorbs both hydrogen sulfide and carbon dioxide while exhibiting preferential affinity for hydrogen sulfide relative to carbon dioxide;

generating a stream of the absorbent which moves from a lean condition in countercurrent flow over a series of contact stages to a stream of the supply gas so as to contact the absorbent with the supply gas stream so as to absorb at least partly the hydrogen sulfide and the carbon dioxide to form a rich absorbent while generating a stream of sweetened product gas which contains levels of hydrogen sulfide and carbon dioxide below a predetermined maximum allowable value;

passing the rich absorbent through a regeneration process which strips substantially all of the hydrogen sulfide and carbon dioxide from the rich absorbent returning the absorbent to the lean condition for said stream while generating a stream of the hydrogen sulfide and carbon dioxide;

wherein the absorption of the hydrogen sulfide and carbon dioxide by the absorbent is carried out in two steps in which:

in a first operation the absorbent in lean condition is contacted with

the supply gas stream;

and in a second operation the selectivity for hydrogen sulfide relative to carbon dioxide is enhanced by contacting the rich absorbent leaving the first operation with a second gas which has a higher ratio of hydrogen sulfide relative to carbon dioxide than the supply gas stream so as to cause the already rich absorbent to become even more heavily loaded with hydrogen sulfide and carbon dioxide, but because of the high ratio of the second gas, the increased loading is preferentially in favor of hydrogen sulfide.

3.(new) The method according to Claim 1 wherein the source of the second gas is the stream of the hydrogen sulfide and carbon dioxide, a portion of which is recycled back to the second operation, where the stream of the hydrogen sulfide and carbon dioxide contains approximately the same ratio as existed in the rich absorbent after the second operation. .

4.(new) The method according to Claim 1 wherein the contact with the second gas in the second operation occurs counter currently over a series of contact stages.

5.(new) The method according to Claim 1 wherein the first and second operations take place in the same countercurrent absorption column which operates throughout at substantially the same pressure.

6.(new) The method according to Claim 1 wherein lean amine entering at the top of the upper section of the column comes in contact with sour gas containing both H_2S and CO_2 which enters the column at an intermediate stage in the mid section of the absorber at the point where the first operation interfaces with the

second operation., wherein the first operation occurs in the upper section of the column and the second operation occurs in the lower section such that the combined actions of the first and second absorption operations will attain an internal balance in which the rich amine leaving the base of the column will be enriched in H_2S, while the CO_2 thus excluded from the rich amine solution will exit from the top of the column along with the sweetened product gas from which the H_2S has been removed.

7.(new) The method according to Claim 1 wherein there is provided a single feed of the lean absorbent at a top of the first operation.

8.(new) The method according to Claim 1 wherein there are provided a plurality of feeds of the lean absorbent at different positions through the first and second operations.

9.(new) The method according to Claim 1 wherein the first and second operations take place in at least two different absorber towers operating at different pressures.